

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 355 (WISCONSIN AVENUE) AND ELM STREET IN MONTGOMERY COUNTY, MARYLAND. MD 355 IS ASSUMED TO RUN IN AN NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA THREE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 355 APPROACHES OPERATING CONCURRENTLY AND THE ELM STREET APPROACH OPERATING ALONE.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS BOTH LEGS OF MD 355 AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS THE NORTH LEG OF PIKESWOOD DRIVE.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 355 (WISCONSIN AVENUE) AT ELM STREET - NORTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS WISCONSIN AT ELM, WAIT." \*

WALK: RAPID TICK

MD 355 (WISCONSIN AVENUE) AT ELM STREET - SOUTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS WISCONSIN AT ELM, WAIT." \*

WALK: RAPID TICK

ELM STREET AT MD 355 (WISCONSIN AVENUE) - EAST LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS ELM AT WISCONSIN, CROSSWALK ANGLES RIGHT, WAIT." \*\*

WALK: RAPID TICK

\* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PEPPENDICULAR CROSSING IS < 10'  
\*\* MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "S" BASE MOUNTED CABINET.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATEGORY CODE	QUANTITY	DESCRIPTION
900000	1 EACH	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT, 1-8 CAMERAS
973022	6 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (GROUND MOUNT) : - 1 EACH R5-1 (30 IN. x 30 IN.) - GROUND MOUNT
973023	84 L.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) : - 1 EACH R3-1 (36 IN. x 36 IN.) - MAST ARM MOUNT - 2 EACH R3-18 (36 IN. x 36 IN.) - MAST ARM MOUNT - 1 EACH R3-5(L) (30 IN. x 36 IN.) - MAST ARM MOUNT - 1 EACH R3-5(R) (30 IN. x 36 IN.) - MAST ARM MOUNT - 2 EACH R3-4 (36 IN. x 36 IN.) - MAST ARM MOUNT - 1 EACH R6-1(L) (36 IN. x 12 IN.) - POLE MOUNT - 4 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS WISCONSIN AVENUE" - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS ELM STREET"

MONTGOMERY COUNTY

C. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY

QUANTITY	DESCRIPTION
1 EACH	MONTGOMERY COUNTY SPLICE CABINET - POLE MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE	QUANTITY	DESCRIPTION
120500	1 EACH	MAINTENANCE OF TRAFFIC
203030	8 C.Y.	TEST PIT EXCAVATION
585621	355 L.F.	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	100 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
801004	18 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
801104	15 L.F.	WOOD SIGN SUPPORTS 4 INCH X 4 INCH
802145	1 EACH	ADJUST EXISTING HANDHOLE
802501	525 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805125	100 L.F.	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805135	15 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805140	125 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805155	235 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
807202	1 EACH	METERED SERVICE PEDESTAL
810022	75 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	7 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813014	7 S.F.	INSTALL GROUND SIGN
813015	103 S.F.	INSTALL OVERHEAD SIGN
818004	7 EACH	10 FOOT BREAKAWAY PEDESTAL POLE
818030	1 EACH	STEEL POLE WITH A SINGLE 38 FOOT MAST ARM
818036	1 EACH	STEEL POLE WITH TWIN 50 FOOT AND 50 FOOT MAST ARMS
831010	2 EACH	LED LAMP AND LUMINAIRE
837001	10 EACH	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860284	18 EACH	12 IN. LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860290	3 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	820 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861106	410 L.F.	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	1315 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	240 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
866103	2 EACH	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
871041	1 EACH	INSTALL AUXILIARY CABINET WITH TERMINAL STRIP - POLE MOUNT
871202	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
800000	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
800000	6 EACH	16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	6 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION
800000	1 EACH	2-WIRE CENTRAL CONTROL UNIT
800000	2 EACH	PAINT SIGNAL AND MAST ARM POLE FEDERAL BROWN NO. 5950-20040
800000	7 EACH	PAINT PEDESTAL POLE FEDERAL BROWN NO. 5950-20040

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-02 (SHOULDER WORK)	STANDARD NO. MD-104.04-14 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-04 (LEFT LANE CLOSURE)	STANDARD NO. MD-104.04-16 (INTERSECTION LEFT LANE, TURN BAY)
STANDARD NO. MD-104.04-06 (RIGHT LANE CLOSURE)	
STANDARD NO. MD-104.04-08 (CENTER LANE CLOSURE)	

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. CORREN JOHNSON  
CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

MR. TOM FOUNTAIN  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (301) 513-7304

MR. VICTOR GAYTON  
DISTRICT UTILITY ENGINEER  
PHONE: (301) 513-7350

MS. ANYESHA MOOKHERJEE  
ASSISTANT DISTRICT ENGINEER - TRAFFIC (MONTGOMERY)  
PHONE: (301) 513-7404

MR. KAMAL HAMUD  
TEAM LEADER, TRAFFIC SIGNALS  
MONTGOMERY COUNTY DOT -  
DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS  
PHONE: (240) 777-8761

MR. BOB RICKETTS  
MONTGOMERY COUNTY SIGNAL SHOP  
PHONE: (240) 876-3681

MR. ROBERT SNYDER - OOTS  
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS  
PHONE: (410) 787-7630

MR. EDWARD RODENHIZER - OOTS  
CHIEF, SIGNAL OPERATIONS SECTION  
PHONE: (410) 787-7670



WHITMAN, REQUARDT  
& ASSOCIATES, LLP  
801 South Caroline Street, Baltimore, Maryland 21231



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (Wisconsin Avenue) at Elm Street  
Bethesda, Maryland

TRAFFIC SIGNALIZATION PLAN

SCALE NONE ADVERTISED DATE 3/25/2013 CONTRACT NO. MD175177

DESIGNED BY S. Bloss COUNTY Montgomery  
DRAWN BY S. Bloss LOGMILE 15035501.54  
CHECKED BY N. Leary TMS NO. L488  
F.A.P. NO. SEE TITLE SHEET TOD NO.

TS NO. 2581 A DRAWING TSP-9 OF 20 SHEET NO. ### OF ###